IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Atty. Docket No: 059440/0141

In re patent application of

DAI, ZIYU et al.

Serial No. 10/051,307

Filed: January 22, 2002

For: GENE PROMOTERS ISOLATED FROM POTATO AND USE THEREOF



STATEMENT TO SUPPORT FILING AND SUBMISSION IN ACCORDANCE WITH 37 C.F.R. §§ 1.821-1.825

Assistant Commissioner for Patents Washington, D.C. 20231
Box SEQUENCE

Sir:

In connection with a Sequence Listing submitted concurrently herewith, the undersigned hereby states that:

- the submission, filed herewith in accordance with 37
 C.F.R. § 1.821(g), does not include new matter;
- 2. the content of the attached paper copy and the attached computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. § 1.821(c) and (e), respectively, are the same; and
- 3. all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United

Serial No. 10/051,307

States Code and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom.

Respectfully submitted,

James A. Coburn

HARBOR CONSULTING

Intellectual Property Services 1500A Lafayette Road Suite 262 Portsmouth, N.H. 800-318-3021

SEQUENCE LISTING

```
<110> DAI, ZIYU
     SHI, LIFANG
     HOOKER, BRIAN S.
     GENE PROMOTERS ISOLATED FROM POTATO AND USE THEREOF
     059440/0141
<140> 10/051,307
<141> 2002-01-22
<150> 60/263,224
<151> 2001-01-23
<160> 14
<170> PatentIn Ver. 2.1
<210> 1
<211> 1595
<212> DNA
<213> Solanum tuberosum
<400> 1
gtaatacgac tcactatagg gcacgcgtgg tcgacggccc tggctggtat ctttgtttga 60
aaaaattgga aaagaacgta ggaccacatg gaccttgggt gcaacaatat tgttgtcctc 120
caaatgtggt acaaggattg ttacatcctc cgggtacttt aagttgacca gggcattcac 180
catttatatt tgccgtgcat tgaattgtgt ggcatttccc tccacttgga ttagtcgggg 240
cgaaagtcat cggtatatta aatccatcaa ctaaagaaat gtcccagaaa tctaagttgt 300
tgaactggtc caaggcgtac tcggctaggg tgtttggtgg tttgccccac ccggtgcact 360
gcaggacacc accacaatca ccagtcatgc acgaacctct accagcacca tcgaagttac 420
atccagtacg accccatata cctgccatcg tagtgcccct aggcgcatca atgacccaca 480
tttggccccg atcgaaacgt cggcacccgc tttcggggtc gatgccgccc aaacgatgta 540
tggacagttg ttgcgtacct cgatagtggc agcataagtg aaagtcacaa aagcaagaag 600
ggagaaaaca aaagaagatc tcaagtagcc catgtttgtt gaaatttata tgtggacaaa 660
ttatttttgg tactttatat atagggatat ggcggctttt ggcactacgg atattaatcg 720
tattatatag caatatcata ctttgactaa ttataaacga aatatattac aatatgattt 780
ggtaaacgtt gaggtggaaa aatgtataag agccgcctaa taattaatta ttttatgaat 840
atageetata gttacaagtt aaetttattt ggtgataaet ttgacatata aaetetgtaa 900
cgtgacggaa tttttcttaa aactaaatat taaaaagcag ctattttcag atttttcgtg 960
gccaaagttt cttgcatact tatctatgcc catttttact tttatcgttc tagccttcta 1020
catattactc gtagggatca tttgttagat caatctgaaa tatacaaacc attctgattt 1140
taaaatcaca accattctgc caaggggaag tctatgtgat ccgtgacaag tggtttgatt 1200
attcttagtc tagattggag tcacaacttt tagtgcaaat atctattaaa agaaccccta 1260
ttgatgcaaa tatctattaa aagaacccct attcatgctt tatttatttt tacgatcgga 1320
gcatggatat atttactaat taaaataaat tggaaggaat tgatcgacaa gtcatcaagc 1380
ttatcgtcga tccacattaa aataacgtta gtatggctgc ttttagagaa acaagtggat 1440
catgtataat ttagttttaa aatatctcct ataaatatct atatatacct ctaaaactaa 1500
atgcatctaa caacacaaat ataaacttag attctttaaa gaaattgcag aattaaatgg 1560
aggcaaataa gtctatggtg aagttggttg ctttc
```

<210> 2 <211> 1598

```
<212> DNA
<213> Solanum tuberosum
```

```
<400>2
gtaatacgac tcactatagg gcacgcgtgg tcgacggccc gggctggtat ctttgtttga 60
aaaaattgga aaagaacgta ggaccacatg gaccttgggt gcaacaatat tgttgtcctc 120
caaatgtggt acaaggattg ttacatcctc cgggtacttt aagctgacta ggacattcac 180
catttatatt tgccgtgcat tgaattgtgt ggcatttccc tccacttgga ttagtcgggg 240
cgaaagtcat cggtatatta aatccatcaa ctaaagaaat gtcccagaaa tctaagttgt 300
tgaactggtc caaggcgtac tcggctaggg tgtttggtgg tttgccccac ccggtgcact 360
gcaggacacc accacaatca ccagtcatgc acgaacctct accagcacca ccgaagttac 420
atccagtacg accccatata cgtgccatcg tagtgcccct aggcgcatca atgacccaca 480
tttggcctcg atcgagacgt cgggcaccgc ctatcgggtc gatgccgccc aaacgatgta 540
tggacagttg ttggcggtac ctcgatagtg acagcataag tgaaagtcac aaaagccaga 600
agggagaaac caaaagaaga tctcaagtag cccatgtttg ttgaaattta tatgtggaca 660
aattattttt ggtactttat atatagggat atggcggctt ttggcactac ggatattaat 720
cgtattatat aacaatatca tactttgact aattataaac gaaatatatt acaatatgat 780
ttggtaaacg ttgaggtgga aaaatgtata agagccgcct aataattaat tattttatga 840
atataqccta tagttacaag ttaactttat ttggtgataa ctttgacata taaactctgt 900
aacgtgacgg aatttttctt aaaactaaat attaaaaagc agctattttc acatttttcg 960
tggccaaagt ctcttgcata cttatctatg cccattttta cttttatcgt tctagccttc 1020
taggtacacg tttgaacata aaaaatcata aaaattgaaa gtaaaaatta gtttttttt 1080
ttcatattac tcgtatggat catttgttag atcaatctga aatatacaaa ccattctgat 1140
tttaaaatca caaccattct gcctaatggg gaagtctatg tgattcgtgg caagtgtttg 1200
attattetta gtetagattg gagteacaae ttttagtgea aatatetatt aaaagaacee 1260
ctattgatgc aaatatctat taaaagaacc cctattcata ctttatttat ttttacgatc 1320
ggagcatgga tatatttact aattaaaata aattgggagg aattgatcga caagccatca 1380
agcttatcgt cgatccacat taggataacg ttagtatggc tgtttttaga gaaacaagtg 1440
gatcatgtac aattgagtta aaaaatatct cctataaata cctgtctatc cctcttaaac 1500
caaatacatc taacacacaa aatataaact tagattcctt aaagaaattg cagaattaaa 1560
                                                                  1598
tggaggcaaa taagtctatg gtgaagttgg ttgctttc
```

```
<210> 3
<211> 1546
<212> DNA
<213> Solanum tuberosum
```

<400> 3 atctttgttt gaaaaaattg gaaaagaacg taggaccaca tggaccttgg gtgcaacaat 60 attgttgtcc tccaaatgtg gtacaaggat tgttacatcc tccgggtact ttaagctgac 120 taggacattc accatttata tttgccgtgc attgaattgc gtggcatttc cctccacttg 180 gattagtcgg ggcgaaagtc atcggtatat taaatccatc aactaaagaa atgtcccaga 240 aatctaagtt gttgaactgg teegaggegt acteggetag ggtgtttgge ggtttaecee 300 acceggtgca etgeaggaea ceaceaeaat caceagteat geaegaaeet etaeeageae 360 catcgaagtt acatccagta cgaccccata tacgtgccat cgtagtgccc ctaggcgcat 420 caatgaccca cgtttggcct cgatcgagac gtcggccacc gcctatcggg gtcgatgctg 480 cccagacggt gtatggacag ttgttgcgta cctcgatagt ggcagcataa gtgaaagtca 540 caaaagcaag aagggagaaa acaaaagaag atctcaagta gcccatgttt gttgaaattt 600 atatgtggac aaattatttt tggtacttta tatataggga tatggcggct tttggcacta 660 tggatattaa tcgtattata taacaatatc atactttgac taattataaa caaataatat 720 tacaatatga tttggtaaac gttgaggtgg caaaatgtat aagagccgcc taataattaa 780 ttattttatg aatatagact atagttacaa gtgaacttta tttggtgata acttggacat 840 ataaactctg tatcgtgacg gaacttttct taaaactaaa tattaaaaag cagctatttt 900 aatatttttc gtggccaaag tttcttgcat acttatctat gcccattttt acttttatcg 960 ttctagcctt ctaggtacgc gtttgaacat aaaaaatcat aaaaattgaa agtaaaaatt 1020 agttttttt catattactc gtatggatca tttgttagat caatgtgaaa tatacaaatc 1080 attctgattt taaaatcata actattctgc atgatgggaa cgtctatggt gattcgtgac 1140

```
aagtgtttga tttattctaa gtctggattg gagtcacaac ttttagtgca aatatctatt 1200
aaaagaaccc ctatttgatg caaaagtcaa taaatattta atatcatnct ttatttattt 1260
ttacgatcgg agcatggata catttactaa ttaaaataaa ttggaaggaa ttgatcgaca 1320
agtcatcaag cttatcgtcg atccacattc ccctaacgtt agtatggctg cttttagaga 1380
aacaagtgga tcatgtataa tttagttttc ccctatctcc tataaatatc tatatatacc 1440
tctaaaacta aatgcatcta acaacacaaa tataaactta gattctttaa agaaattgca 1500
gaattaaatg gaggcaaata agtctatggt gaagttggtt gctttc
<210> 4
<211> 1175
<212> DNA
<213> Solanum tuberosum
<400> 4
actatagggc acgcgtggtc gacggccctg gctggtctga tttaggagta tttcattcaa 60
tcaattttat aagaatttac agtctgcact ctggagacat tcttatttca taatgtaata 120
ttgcgtaatt ggggaagtga agtttcttga ggcgcttttc tagtgttttt aacttcattt 180
tgtgctatca tagttacttg tttttcgtta aggtaagatt ttattgacgt atatgggaaa 240
ttccttgtaa gagctgacac ggtaaactgg acctaaatat atttagaact atgcaccacc 300
ccttcaaggg gaggtaagtt ttttttttt ttttgaggtg tttgggaaag acaaaaaatg 360
tttttaaaca cttattatta ggccaaaaag tataaaaata aactaaaagc taaaagttgg 420
gtatgcccga cttatgattt ttaactttta gcttataagc tacttaaaga aagccaatcc 480
aaacgacctg ttcttaggtg taagattttg aagactaagc aaatttattt tcatgaaaca 540
acattgtttt tgtttagcga tatgccatta agtcgtttat gttctaatta atctggtttt 600
qtaqqctggt ttccatgcaa aatgtattcc agcagctagc agtttacagg agcatatagt 660
taaatcaaca ccggcaagat atagtagtac acaggcatgt ttggaaaaat gaccatttct 720
ggaactgata ataaaagggt aattttctgt tttactttct gaccactgga tctcttttt 780
tgcattcctt gtttatggac agtcattgct aaatgacatg gcatttcttc atgagtacta 840
ctcgtcatat gtggaatata tttcactcat ttgacataaa agcgtaataa gaattttact 900
aaaacaatgt atctccactt ttgcaggttc aagggtcatg atatgttggc accettcact 960
gctgggtggc aaagtactga tgtggatcct ttaattatag agaagtctga ggttagattt 1020
atgtctactt ttgctgtcta acttaagaga agtttatata tctttcgtga tcaactttta 1080
cattttgaca tagggatccc acgtatatga catgcaaggg aggaagtatc ttgatactct 1140
                                                                  1175
agctggtttg tggtgcacag cactaggggg gaacg
<210> 5
<211> 1188
<212> DNA
<213> Solanum tuberosum
<400> 5
actatagggc acgcgtggtc gacggcccgg gctggtctga tttaggagta tttcattcaa 60
tcaattttat aagaatttac agtctgcact ctggagacac tcttatttca taatgtaata 120
ttgcgtaatt ggggaagtga ggtttcttga ggcgcttttc tagtgttttt aacttcattt 180
tgtgctatca tagttacttg tttttcgtta aggtaagatt ttattgacgt atatgggaaa 240
ttccttgtaa gagctgacac ggtaaactgg acctaaataa atttagaact atgcaccacc 300
cctttaagga tgtttggatc gtcttatttt aagtagtttt gaacttttaa gcatttttt 360
ttttttggag gtgtttggga aagacaaaaa atgtttttaa acacttatta ttaggccaaa 420
aagtataaaa ataaactaaa agctaaaagt tgggtatgcc cgacttatga tttttaactt 480
ttagcttaca agctacttaa agaaagccaa tctaaacgac ttgttcttag gtgtaagatt 540
ttgaagacta agcaaatttc tttccatgaa acaacattgt ttttgtttag cgatatgcca 600
ttaagtcgtt tatgttctaa ttaatctggt tttgtaggct ggtttccatg caaaacgtat 660
tccagcagtt agcagtttac aggagcatat agttaaatca acaccggcaa gatatagtag 720
tacacaggca tgtttggaaa atgacatttc tggaactgat aataaagggt aatttctgtt 780
ttactttcct accactggat ctctttttt gcattccttg tttatggaca gtcattgcta 840
aatgacatgg catttattca tgagtattac tcgtcatatg tggaatatac ttcactcatt 900
```

```
tgacataaaa gctgcacgta caagcgtaag aagaatttta ctaaaacaat gtatctccac 960
ttttgcaggt tcaagggtca tgatatgttg gcacccttca ctgctgggtg gcaaagtact 1020
gatgtggatc ctttaattat agagaagtct gaggttagat ttatgtctac ttttgctgtc 1080
taacttaaga gaagtttata tatctttcgt gatcaacttt tacatttcga catagggatc 1140
ccacgtatat gacatgcaag ggaggaagta tcttgatact ctagctgg
<210> 6
<211> 529
<212> DNA
<213> Solanum tuberosum
<400> 6
accagettag attetttaaa gaaattgeag aattaaatgg aggeaaataa gtetatggtg 60
aagttggttg ctttcttgat aatttttgca tcatgctttc aatctctcac tgctcaagat 120
ttggaaatcg aagttagtga tggcttaaat gtcttgcaac tacatgatgt gtctcagtca 180
ttttgtccag gtgtgacgaa agaaagttgg ccagaacttc tagggacacc agctaagttt 240
gcaaagcaaa taattcagaa ggaaaatcca aaattaacaa atgttgaaac tctactgaat 300
ggttctgctt ttacagaaga tttgagatgc aatagagttc gtctttttgt taatttattg 360
gacattgttg tacaaactcc caaagttggt taaacaaaat taattcatgt tatatatatg 420
tatctagcct ccagaaaaat aaattggagt tgtaatatgg ttaatgcttc cactatattt 480
ggtgataaat aaacgtggct ttttaatatt aaaaaaaaa aaaaaaaaa
<210> 7
<211> 2035
<212> DNA
<213> Solanum tuberosum
<400> 7
ccgatatttg atttgcaatt tagcaacgaa ttgattcgaa ggatcatatc aaatggctaa 60
gatttcttgt cttattggat ccaccgtcaa agcagctatc accgcccagg ctcctttcca 120
tgcaaaacgt attccagcag ttagcagttt acaggagcat atagttaaat caacaccggc 180
aagatatagt agtacacagg catgtttgga aaatgacatt tctggaactg ataataaagg 240
gttcaagggt catgatatgt tggcaccctt cactgctggg tggcaaagta ctgatgtgga 300
tcctttaatt atagagaagt ctgagggatc ccacgtatat gacatgcaag ggaggaagta 360
tettgataet etagetggtt tgtggtgeac ageactaggg gggaacgage etegeetggt 420
tgatgctgcc actaagcaat taaacacatt gccattttac cattcatttt ggaaccgtac 480
aacaaaacct tctttggatc ttgcgaagga gcttctggat atgtttactg caaagaaaat 540
ggcaaaagct tttttcacca atagtggatc agaagccaat gatacccagg tgaagctggt 600
ttggtattat aacaatgctc ttggaaggcc aaacaaaaag aaatttatag ctcgagcaaa 660
agcatatcat ggttcaactc ttatttctgc cagtctcact ggtcttcctg cattacatca 720
aaattttgat etteetgete eatttgttet teacacegae tgteeteatt attggegtta 780
tcatctgcca ggtgagacag aggaggagtt ctctaccaga ttggctaaaa atttggaaga 840
tettateete aaagaggge etgaaacaat agetgettte attgetgaac cagteatggg 900
ggcaggaggt gtcatacctc ctccagctac ctattttgat aagattcaag ctgtagtgaa 960
gaaatatgac attetttea ttgeggatga ggtgatetgt geetttggga ggettggaac 1020
aatgtttggc tctgacatgt ataacatcaa acctgatctt gtctccttag caaaggctct 1080
ttcttctgca tatatgccaa ttggagctgt ccttgtaagc cctgaagttt ctgatgtaat 1140
tcattctcaa agcaataaac ttggttcctt ttcccatgga ttcacttatt ctgggcatcc 1200
tgttgcatgc gcggtggcat tggaagctat taaaatctac aaggagcgaa atatggttga 1260
gagagtaaat acaatatccc caaagtttca agaaggtctg aaggagtttt ctgacagtcc 1320
cattatcgga gagattaggg gaattggttt gatccttgcc acagagtttg cgaataacaa 1380
atctcctaat gatcctttcc ctcctgaatg gggtgttggt gcatattttg gagcacaatg 1440
tcagaagaat ggcatgttgg tacgtgttgc tggtgatacc atcatgatgt ctcctccatt 1500
tgtagttact ccagaagaac ttgacgagtt gattagcatc tatgggaaag cattgaggga 1560
aactgaaaag agagtagaag aactcaagtc tcagaagtga tattagttga cagcacaagc 1620
```

```
tgttggatat tctgtaaatg tccagaatga agtaatgagt ataattttta gtccaagttg 1740
ctcctcttct ctttcatttt acatgcagta tagtttcacc agttcactta ttgatgaaga 1800
tgtctatccc cttaaccagt tgtcacccaa gattaatgca ttttaccaaa aaatcgaatt 1860
tattaatcta tgttcttgta altaattgag ttttttttat gttcgagttt gtacgttaat 1920
gcacatttct cctataaagt cttttctgtc aataatattt tcttaaaagt aatcatgttg 1980
2035
<210> 8
<211> 22
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 8
gtaatacgac tcactatagg gc
                                                               22
<210> 9
<211> 19
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 9
actatagggc acgcgtggt
                                                               19
<210> 10
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
                                                               26
gaaagcaacc aacttcacca tagact
<210> 11
<211> 38
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 11
cttcaccata gacttatttg cctccattta attctgca
                                                               38
<210> 12
<211> 26
```

```
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 12
ccagctagag tatcaagata cttcct
                                                                   26
<210> 13
<211> 28
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 13
cgttccccc tagtgctgtg caccacaa
                                                                   28
<210> 14
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 14
gcttagtggc agcatcaacc aggcgag
                                                                   27
```